

Bridges Conference Proceedings Guidelines: A Microsoft Word Template for Your Paper

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Abstract

We present a working self-referential sample of how a Bridges Conference paper should be formatted, using Microsoft Word. Abstracts such as this should be formatted in a 9 point Times Roman font, be right- and left-justified, and have margins inset from those of the main paper. Your abstract should be only one paragraph, comprising anywhere from three to eight lines of text—the shorter the sweeter. Abstracts will function independently from the rest of the paper so is a good idea to avoid footnotes and citations. Abstracts are easier to deal with as plain text so avoid unnecessary formatting and symbols.

Introduction

You, the author of a Bridges Conference paper, are responsible for the final typeset version that will be printed in the Proceedings and duplicated on the CD-ROM accompanying the Proceedings. Therefore, we the editors ask that you prepare your paper according to the guidelines described here.

There are two versions of these guidelines, the one you are reading is for word processor users¹. But there is another version for LaTeX. If you are more comfortable using LaTeX or if you have a substantive amount of mathematical formulae, please check out the LaTeX version of the Bridges Guidelines available for download at <http://www.bridgesmathart.org>. Otherwise, if at all possible you should strive to use a recent version of Word, and prepare your document in the .docx format using this file as a template.

In either case, however, you *will be required* to submit your paper as a single PDF (Portable Document Format) file whose layout is essentially the same as described here. If you have problems creating a PDF version, please advise the editors as soon as possible so that we can help you.

Uniformity, clarity, and neatness of style enable the editors to create a professional-looking copy of the Proceedings. Therefore, the document styles described herein must be adhered to carefully, because otherwise too much work is placed upon the volunteers who must put the Proceedings into book form prior to the Conference. *Substantive variations from the styles described here are grounds for rejecting your paper, regardless of its astoundingly brilliant, iconoclastic, artistic, and/or groundbreaking content.*

Writing Style

Authors ... are encouraged... by their readers... to avoid... the somnambulant... passive voice... as much as... possible... zzzzz. It is perfectly acceptable to use the first person “I” when talking about one’s own artistic endeavors, and the inclusive, academic “we” works for more formal needs.

¹ This Word .docx file as well as one for LaTeX is available for download on the Bridges website at <http://www.bridgesmathart.org>. Please get the latest version for the current year as the guidelines will change over time.

Page Size, Numbering, Margins, and Justification

Use a template. Use a copy of this document as a template. It will correctly set the paper size, margins, and all other styles for you. Replace this text with your text. Note that Word allows special paste options so you can paste text from the clipboard while adhering to the local font and style settings of this document (the specifics of how vary by version and operating system).

Paper size. We will print papers using US Letter size (8.5 × 11 inches) (21.59 × 27.94 cm). If you are working outside the USA, please check that you have *not* used A4 paper.

Page numbers. *Do not insert page numbers or headers or footers in your paper.* At this stage, neither you nor the editors know where in the Proceedings your paper will be placed. Sequential page numbers will be added later at the publishing stage.

Page limits. Except in special circumstances where the editors have informed you otherwise, you must limit your paper to eight pages for regular and workshop papers, and to four pages for short papers. If your submission is longer than these limits the editors will ask you to shorten it, or they may reject the paper outright, or if not, you may be asked to provide funds to help pay for your extra length.

Even length. The Proceedings will be a bound book. Every paper will begin on an odd-numbered, right-hand page. If your initial draft comes in at an odd number of pages, it will end with an entire blank page just prior to the next paper after it. So please work to fill your paper out to an even number of pages, by adding or enlarging an illustration, or fleshing out some part of the exposition. Either that, or cut it down to an even six or four pages.

Layout. Your paper should conform to the following specifications to ensure that all papers have uniformity of appearance in the Proceedings. If you are using this document as a template, most of this should happen automatically, but you should check it anyway.

1. On the first page, the distance from the top edge of the paper to the title should be 3 cm (1 3/16 inches). To do this manually, simply insert one extra line at the top of the title page.
2. On the second and subsequent pages, the distance from the top edge of the paper to the top of the first line of type should be 2.5 cm (1 inch).
3. The distance from the left edge and right edge of the paper to the left and right margin of the type should be 2.5 cm (1 inch).
4. On the first page, the paragraph containing the abstract text should have left and right margins of approximately 3.5 cm (1 3/8 inches).
5. The distance from the bottom of the last line of type on the page to the bottom edge of the paper should be no less than 2.5 cm (1 inch). For all but the last page, strive to make this distance as close to 2.5 cm (1 inch) as possible. The final line or figure of your paper can end anywhere on the last page.
6. Leave a small amount of vertical space (5 pt) between paragraphs. This has already been done in this template document, but if you are using Word and create a new paragraph you should insert this extra line space as follows: Place the cursor at the beginning of the first line of the paragraph. Find the Paragraph settings for Spacing (possibly the Page Layout tab). Set the Before spacing to 5 pt.

Justification. You should justify the text of your paper to both the left and right margins. Ragged right edges do not conform to our house style. Unlike the other paragraphs in this template file, this paragraph you are currently reading has a ragged right edge and is *not* properly justified.

Paragraphs. With the exception of the first paragraph in any section, you should indent the first line of every paragraph by approximately .3 inch (.75 cm). Leave the first paragraph of any section left justified. But if you are using initial, short, boldface sub-heading phrases—as we are in this section—don’t indent paragraphs beginning with those boldface sub-headings. The boldness is sufficient warning to the reader that a new thought is arriving. And remember: Add 5 pt of extra line spacing between paragraphs.

Use two blank lines between the end of the paragraph and the next major heading; use one blank line between the major heading and the immediately following first paragraph.

Text and Font Sizes

Your paper should be single-spaced in 11 pt “Times New Roman,” “Times-Roman,” or similar Times-family font. Some technical formatting programs print mathematical formulas in *italic* type, with subscripts and superscripts in a slightly smaller font size. This is acceptable. If you use LaTeX and its math typesetting apparatus, all of this is taken care of for you.

Your paper’s title should be centered across the top of the first page and should be in 16 pt “Times-Roman” or similar.

The author name(s) and address(es) should be centered below the title, using 12 pt type. Below the names, any address information should be centered on as few lines as possible. You can place on a single line address fields that normally would appear on separate lines, as long as you separate them with a comma. All of this is demonstrated on the first page of this template paper. As this paper has two authors, it uses a table to layout each author’s information. You can replace the table with straight text (centered) for one author or add more columns and/or rows as necessary for more authors.

An e-mail address is optional. Furthermore it should only be provided if you are confident you will be reachable at it for at least several years into the future. Place it centered below the address information, formatted in a typewriter typeface such as Courier New, also shown above.

The reference section should be in 11 pt font like the rest of the paper. If you’re really pressed for space, you may try a 10 pt font, but do not go any smaller.

For emphasis, use italics. Do not use color or boldface. The proceedings are printed in black and white, and boldface is reserved for titles, headings, and sub-headings.

Each figure in your paper should be captioned and numbered sequentially using the word Figure and a number, all in bold 11 pt text, not italic. Center all captions, just below each figure. The text explaining the figure should be in 11 pt *italic*. See Figure 1 below for an example.

Title and Headings

Paper title. Your paper’s title should be as short and snappy as possible, with just enough information to get the reader interested. Strive to make it just one line if at all possible, two lines at the maximum.

Section headings. Center your major headings, and use a bold 12 pt. font, without underlining. Avoid numbering sections unless you are referring within the text from one section to another. For short

expositional Bridges papers, such cross-sectional references are rare.² Whether you number your sections or not, the last section, **References**, should *not* be numbered.

Sub-section headings. Avoid more than two levels of heading: sections and sub-sections should be more than sufficient in a relatively short, illustrated Bridges paper. Placing sub-section headings on their own line wastes a great deal of usually precious space. So if you use two levels, use the style here, where the bold sub-section title begins one or more paragraphs. For example:

Case and punctuation. The title and section headings should use mixed upper and lower case: conjunctions such as “and” or “or” and prepositions such as “of” or “with” begin with a lower case letter, whereas Nouns, Verbs, Adjectives, and Other Important Words begin with an uppercase letter. Avoid most punctuation (one colon or comma is acceptable). Do not end a lone title or section heading with a period.

On the other hand, all non-indented, in-line, boldface sub-section headings should not be more than a few words, should not be long sentences, and should contain no punctuation except for a final period. The period separates the sub-heading from the beginning of the paragraph that follows, as demonstrated in this section. In general, only capitalize the first word of the sub-heading. But if you prefer to use mixed case, which makes the sub-heading stand out a bit more, ensure that you are doing so consistently throughout the paper in all your sub-headings.

Figures and Illustrations

Bridges papers that have illustrations in them have a better chance of being read. So think about illustrating pictorially what you are describing mathematically, even if your subject is time-based music or some other fundamentally non-visual medium.

Positioning. Ideally, you should position each illustration within the text, between paragraphs, on the same page of its first reference, otherwise it should be on a following page. If you can fit two or more figures beside themselves horizontally, it is a more efficient use of space. You could also place your figures to the left and the right of the text (but avoid too much crowding). Since space is usually at a premium, don’t scale the figure as large as possible if it can be understood at a smaller size.

An easy way to position your figures in Word is to insert a table, place your figures and captions into its cells, then select the table and set the borders (in the Design tab) to none. See Figure 1 for results. If you do use tables, *please* be sure that figures and captions conform to your margins.

Captions. Make sure that you include a caption for each photograph or line drawing. You must number your figures so that you can refer to them in the text.

Copyright material. If an illustration is not your own, you need to get the copyright owner's permission for reproduction if an illustration is not your own. A book published before 1923 is OK to copy in the US. If you take a graphic from the web, get the owner’s permission. (It will probably not be of high enough resolution—see below).

Color. The original color illustrations in your PDF paper will appear online, and in other electronic copies of your paper, but the Bridges Proceedings are currently printed using a gray-scale rendering of the final PDF file you submit. If your paper contains color illustrations, it is *very important* that you preview them by printing your paper out on a non-color printer. Sometimes color illustrations can lose too much information, look muddy, or lose contrast when translated to gray-scale. Shades of blue, green and brown generally become indistinguishable in grayscale. In drawings, do not use color for emphasis, use line thickness or grayness instead.

² Numbering suggests a more technical paper, and establishes a hierarchy, but if you have no cross-section references, then section header numbering in just an 8-page paper is more “noise” than it is useful.



Figure 1: *The wireframe church outside Leeuwarden as seen during Bridges 2008.*

Use the proper file format. Photographs from a camera are often JPEG files and these are acceptable. If you are resaving a picture (say after cropping it) take great care that the JPEG output settings are set to the highest quality to avoid (often dramatically ugly) compression artifacts. PNG files are suitable for non-photographic images. LaTeX users have the luxury of importing vector image formats such as PDF and this is ideal.

High resolution. It is very important to know the resolution of any non-vector images before they are incorporated into your final PDF file. Otherwise, your pictures may not be legible in the printed Proceedings. *If you don't understand the following, or don't know how to find out the required information, then please ask for help.* You should aim for a final resolution of *at least* 300 dpi, and preferably higher. If the picture is being magnified, this means that you also need to take into account the actual size it will be printed. A picture that is 300 by 300 pixels should not be printed in a space larger than one inch square. So for example if you have a picture sized to about 4 inches high in your document, the original must be at least 1200 pixels high in the original incorporated file.

But not too high. We strongly suggest that authors submit papers that are at most 10 MB in size. We often receive many submissions in the 40-50 MB range, containing images that are far larger than they need to be. Remember, when you do decrease the file size, or crop and re-save, *never* re-save as a JPEG file unless the JPEG output settings are set to the highest quality to avoid ugly artifacts.

Creating Your Final PDF File

Again, if you are in doubt about creating a PDF, ask for help first. If we can't guide you with instructions, we may ask you to send us the original word processor file. Keep any incorporated graphics files on hand in case they are also needed.

Using recent enough copies of Word, you should be able to get your paper typeset in a final PDF form, simply by using the Save As command and setting the file type to PDF.

For word processors (on either an Apple Mac OS X computer or a Windows machine), you can create a PDF file by choosing the PDF option in your program's standard Print command.

No matter how you produce your PDF file, there is a possibility that your Bridges paper didn't convert perfectly. Try looking for the appropriate option settings to help solve your PDF's problems.

Finally, check the final file in a PDF viewer, particularly: the paper size, whether headings are on the correct page, whether the illustrations are not degraded, and whether color illustrations are still understandable when printed in grayscale.

A Few Typesetting Tips

First, use this file as your template.

Good typesetting has a great many aesthetic subtleties to it. Here are some further helpful hints, gleaned from the masters, yet still violated in many published math technical papers:

- Look out for “widows”. They occur when the last line of a paragraph appears at the beginning of the next page. Similarly, don't let a section title be on a separate page from what follows.
- When your paper uses a short mathematical symbol, such as X_i , and Word typesets a line starting with X_i (see, right here!), you should precede that X_i with a non-breaking space. The easiest way to do this is to delete the normal space, and then type Ctrl+Shift+Space with your cursor immediately before the X_i (see, we did it!).
- Unlike LaTeX, Word is happy to record and show as many spaces in between your words as you care to type, whether you do so on purpose or not. Searching for and replacing two spaces with one space will tidy your spacing rather quickly. (This is especially true for those of us who learned to type two spaces after a period).
- When you want to set off some text—like this—for emphasis, use em dashes without any surrounding spaces. In Word, you do this by typing two hyphens between two words with *no spaces* in between. Word will convert it to an em dash. If you were to include spaces around your two hyphens, you would get an *en* dash which are dashes used in, e.g., bibliography pages or other numerical ranges, such as from 1–8, but not 1-8.
- Keep an eye on Word's automatic opening and closing quotes. “It usually gets it right”. ”But sometimes it can get it wrong,“ or "not curl the quotes at all!" Retyping the quotes will usually fix things. It might be a good idea to do a final pass to look for these quotes.

Citations and References

Most Bridges paper submissions have had incorrectly or sloppily formatted bibliographies in the final references section. This means that the reviewers for nearly all papers have to spend time explaining how to make it look better and consistent with other papers. So here are some tips to follow that will help:

When citing references in the text of your paper, the corresponding number of your reference should appear in square brackets, e.g., [1]. These should all be citations to numbered items in your bibliography.

A reference should be parenthetical. For example, do this: “This was explained by Conway [1].” but don't do this: “See [1]”.

The final section of your paper contains this bibliography: a list of the scholarly references—especially any previous or related work of others—that you are aware of and are pertinent, that you rely and build upon, or from which you are distinguishing your work. Primary and permanent sources are your friend. In decreasing order of importance and authority, these are: books, published papers in peer-reviewed journals, magazine articles (with date of publication), private correspondence, graffiti, fortune cookies, and most internet websites (some are acceptable, such as <http://www.oeis.org>, as of Dec. 21, 2016).

Papers (like this template) whose bibliographies are essentially lists of website URLs are considered *highly suspect* from a scholarly point of view. Wikipedia references will be frowned upon by reviewers, although good Wikipedia entries often have their own list of references that might be primary and worth citing (after you've read them and deem them pertinent). Nonetheless, if you must reference a URL in cyberspace, include the date you yourself accessed it from your browser, by appending “(as of Feb. 31, 2010)” or similar. Yes, there are respected mathematical peer-reviewed journals that are published on the web (such as the Electronic Journal of Combinatorics [2]) but they are respected because they also publish an annual print volume.

Ensure that your URLs are correct. A single typographic error in a URL makes it worthless. Either click on each one in your final PDF (if the viewer supports jumping to your browser with it), or copy and paste the URL directly into your web browser to ensure it is working and leads to where you think it leads.

If you are using this Word document as a template, this document has its bibliography as formatted numbered paragraphs. Add your references to this list first in order to keep the formatting, then delete the existing entries. You can reference them by adding inserting a Cross-reference to a Numbered item. When you find the reference in the list insert only its Paragraph number like this: [1]. If the list of references ever gets updated or reordered, you will have to update these references. Selecting all text with Ctrl+A and then pressing F9 will do this.

If you find yourself having difficulty with managing your references and bibliography, it might be worth considering switching to the BibTeX tools available in LaTeX.

If you are entering your bibliography (even more) manually, adhere to this formatting: place each reference in a numbered paragraph that has been set up to have a “hanging indent” and a tab stop, both set at the same position, and wide enough to skip over the bracketed, two-digit number that appears at the start of each “paragraph” in the list. If your reference word-wraps onto the next line, then the start of the line will be automatically indented. This leaves the column of reference numbers easy to scan vertically. For example, consider the following bibliographic entries, which are typical in format of nearly all previous Bridges paper submissions done in word processors:

- [9] Thurber, James, “The Day the Bed Fell on My Father”, Consolidated Anthology of Children’s Stories, vol. 3 (1934).
- [10] Einstein, A., “ $e = mc^2$ and its Discontents”, J. Applied Nuclear Metaphysics, vol. 41 (1946), pp. 741–777.
- [11] Plumber, Joe the, “Irregular heterodox orthoplogenies in American election pre-cycles”, J. Intermedia Tea Party “Studies”, vol. 0.00004 (2010), p. vii.

Notice that it is difficult to see the citation references in brackets. The following reformatting is much better because the reference numbers are vertically aligned in their own column, and thus clearer and easier to find:

- [9] Thurber, James, “The Day the Bed Fell on My Father”, Consolidated Anthology of Children’s Stories, vol. 3 (1934).
- [10] Einstein, A., “ $e = mc^2$ and its Discontents”, J. Applied Nuclear Metaphysics, vol. 41 (1946), pp. 741–777.
- [11] Plumber, Joe the, “Irregular heterodox orthoplogenies in American election pre-cycles”, J. Intermedia Tea Party “Studies”, vol. 0.00004 (2010), p. vii.

Try to keep items in your references list only to those that you actually cite previously in the body of your paper. Don't just list some books or papers that influenced you and you think everyone should read, unless there is a specific place in the paper, preferably with page number(s), where it is pertinent to have cited it.

The following is a sample final references section. You are in charge of ensuring a consistent formatting style for each entry. Here, we've even included a reference [5] to demonstrate a full Bridges paper citation.

References

- [1] J. H. Conway, H. Burgiel, C. Goodman-Strauss. *The Symmetries of Things*. A.K. Peters. 2008.
- [2] M. Chladný and M. Škoviera, “Factorisation of Snarks”, *Electronic Journal of Combinatorics*, 17(1), R32 (2010), http://www.combinatorics.org/Volume_17/PDF/v17i1r32.pdf (as of Jan. 8, 2012).
- [3] Y.-J. Fan, B.-Y. Jin. From the “Brazuca” ball to Octahedral Fullerenes: Their Construction and Classification. arXiv:1406.7058v1. 2014.
- [4] P. Pesti. *worldcupballs.info*. <http://worldcupballs.info> (as of March 29, 2015)
- [5] Saul Schleimer and Henry Segerman. Squares that look round: Transforming spherical images. In Eve Torrence, Bruce Torrence, Carlo Séquin, Douglas McKenna, Kristóf Fenyvesi and Reza Sarhangi, editors, *Proceedings of Bridges 2016: Mathematics, Music, Art, Architecture, Education, Culture*, pages 15–24, Phoenix, Arizona, 2016, Tessellations Publishing. Available online at <http://archive.bridgesmathart.org/2016/bridges2016-15.html>